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EXAMINER	
KIM, DAVID S	

ART UNIT	PAPER NUMBER
2633	15

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/600,037	OREN, YAIR	
	Examiner	Art Unit	
	David S. Kim	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1-2, 4-5, 11, and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamel et al. (U.S. Patent No. 5,93,148) in view of Klinger et al. ("A 2.4 Gbit/s synchronous optical fiber transmission system") and Sotom et al. (U.S. Patent No. 5,796,501).

Regarding claim 1, Hamel et al. discloses:

A system (Hamel et al., Figs. 3 and 8) for communicating between a plurality of nodes (Hamel et al., nodes 24, 26, 28, and 30 in Fig. 3) coupled to an optical wavelength division multiplexed ring network (Hamel et al., Fig. 3) comprising:

a first terminal node (Hamel et al., node 24 in Fig. 3) having a communication subsystem (Hamel et al., OADM 24a in Fig. 3) configured to be coupled to the ring network to receive and to transmit signals at a first wavelength (Hamel et al., wavelength $\lambda 1$ in Fig. 3) and to permit signals at other wavelengths to pass, a tributary subsystem (Hamel et al., local user area 58 in Fig. 3), and a multiplexing subsystem (Hamel et al., installation 50 in Fig. 3) coupled to the tributary subsystem and to the communication subsystem;

a second terminal node (Hamel et al., node 26 in Fig. 3) having a communication subsystem (Hamel et al., OADM 26a in Fig. 3) configured to be coupled to the ring network to receive and to transmit signals at a second wavelength (Hamel et al., wavelength $\lambda 2$ in Fig. 3) and to permit signals at other wavelengths to pass, a tributary subsystem (Hamel et al., local

user area 60 in Fig. 3), and a multiplexing subsystem (Hamel et al., installation 52 in Fig. 3) coupled to the tributary subsystem and to the communication subsystem; and

a head-end node (Hamel et al., network head T in Fig. 8) coupled to the ring network to receive and to transmit signals at both the first and second wavelengths, the head-end node having a demultiplexer (Hamel et al., demultiplexers DM1 and DM2 in Fig. 8) to isolate signals received at the first and second wavelengths, and a multiplexer (Hamel et al., optical coupler CO in Fig. 8) to combine the received signals for transmission on the ring network at the first and second wavelengths;

wherein said first terminal node and said second terminal node communicate with said head-end node via respective separate communication channels (Hamel et al., col. 3, lines 36-52; col. 4, lines 1-3; col. 5, line 50; col. 7, lines 51-54; col. 11, lines 1-2; col. 14, lines 55-56).

Hamel et al. does not expressly disclose:

said tributary subsystems configured to be coupled to pluralities of devices to enable the devices to communicate over the ring network;

said multiplexing subsystems to channel signals between the pluralities of devices and the ring network;

said head-end node having an integral cross-connect module, and said determining based on address information included in the received signals; and

wherein said first terminal node and said second terminal node communicate with *each other only through* said head-end node via respective communication channels.

However, it is well known and conventional in the art that tributary subsystems are often configured to more than one device to enable the devices to communicate over a network. Klinger et al. teaches such tributary subsystems (Klinger et al., Figs. 6 and 8). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to configure the tributary subsystem of Hamel et al. to be coupled to pluralities of devices of enable

the devices to communicate over the ring network of Hamel et al. One of ordinary skill in the art would have been motivated to do this to enable the incorporation of multiple data streams (Klinger et al., p. 381, abstract) for multiple devices, users, and customers, thus increasing equipment utility and efficiency. Also, one of ordinary skill in the art would have been motivated to do this since doing so would avoid the need to implement a wholly separate tributary subsystem for each device to communicate with the network, thus maintaining low network and component costs and complexity. Configured as such, the system of Hamel et al. would then accordingly comprise multiplexing subsystems to channel signals between the pluralities of devices and the ring network.

Additionally, Sotom et al. teaches a head-end node (Sotom et al., network controller 1 in Fig. 1) having an integral cross-connect module (Sotom et al., Fig. 4) that determines an output wavelength at which to transmit received signals based on address information included in the received signals. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to implement the head-end teachings of Sotom et al. in the system of Hamel et al. One of ordinary skill in the art would have been motivated to do this since Hamel et al. is relatively silent about how the nodes communicate with each other. That is, Sotom et al. teaches an advantageous way that the nodes of Hamel et al. can use to communicate with each other (Sotom et al., col. 1, line 55 – col. 2, line 12). In comparison with other available communication ways that have collision problems (Sotom et al., col. 1, lines 18-44), implementing the head-end teachings of Sotom et al. in the system of Hamel et al. would avoid potential constraints at the nodes associated with collision problems, greatly simplifying the implementation of the nodes (Sotom et al., col. 2, lines 3-7).

Regarding claim 2, Hamel et al. in view of Klinger et al. and Sotom et al. discloses:

The system of claim 1, wherein the first and second communication subsystems include an optical add/drop multiplexer (Hamel et al., OADM 24a and 26a in Fig. 3) coupled to the ring network.

Regarding claim 4, Hamel et al. in view of Klinger et al. and Sotom et al. discloses:

The system of claim 1, wherein the terminal nodes and head-end node receive and transmit signals using a synchronous optical network communication standard (Hamel et al., col. 5, lines 23-26).

Regarding claim 5, Hamel et al. in view of Klinger et al. and Sotom et al. discloses:

The system of claim 1, wherein the head-end node receives and transmits signals using a synchronous optical network communication standard (Hamel et al., col. 1, lines 6-12), a subset of the signals further use a communication protocol (Sotom et al., concept of address labels in Fig. 2) framed by the communication standard (Hamel et al., col. 1, lines 25-30, 60), the head-end node includes at least one protocol subsystem (Hamel et al., processing means G in Fig. 8; Sotom et al., control unit CU in Fig. 4) to determine address (Sotom et al., col. 5, lines 53-63) information for the communication protocol, and the head-end node is configured to send signals using the communication protocol to the at least one protocol subsystem (Hamel et al., col. 10, lines 53-54; Sotom et al., col. 5, lines 43-63).

Regarding claim 11, Hamel et al. in view of Klinger et al. and Sotom et al. discloses:

The system of claim 1, wherein the head-end node includes first and second transmitters (Hamel et al., lasers LT1 and LT2 in Fig. 8) coupled to the multiplexer to send signals at the first and second wavelengths (Hamel et al., col. 8, lines 4-7), respectively, and first and second receivers (Hamel et al., col. 8, lines 21-25) coupled to the demultiplexer to receive signals at the first and second wavelengths, respectively.

Regarding claim 22, claim 22 is a method claim that corresponds largely to a coherent combination of the limitations in system claims 1 and 5. Since all these claims are rejected

under Hamel et al. in view of Klinger et al. and Sotom et al., all the limitations of system claim 22 are found in Hamel et al. in view of Klinger et al. and Sotom et al. Additionally, Hamel et al. in view of Klinger et al. and Sotom et al. coherently teaches the limitations in claims 1 and 5. That is, the limitations in claims 1 and 5 are not divergently taught under Hamel et al. in view of Klinger et al. and Sotom et al. Therefore, the recited means in the coherent combination of the limitations in claims 1 and 5 read on the corresponding steps in method claim 22.

Claim 22 also includes limitations absent from claims 1 and 5. Hamel et al. in view of Klinger et al. and Sotom et al. also discloses these limitations:

determining destination address information (Sotom et al., col. 6, lines 20-40); and

retransmitting signals received at the head-end node at one of the first and second wavelengths based on the destination address information (Sotom et al., col. 6, lines 20-40).

3. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamel et al. in view of Klinger et al. and Sotom et al. as applied to claim 1 above, and further in view of Jahromi (U.S. Patent No. 5,416,768).

Regarding claim 3, Hamel et al. in view of Klinger et al. and Sotom et al. discloses all the limitations of claim 3 except:

wherein the head-end node includes a tributary subsystem configured to be coupled to a plurality of devices to enable the devices to communicate over the ring network.

However, Jahromi discloses such a tributary subsystem (Jahromi, 8xSTM-1 Tributary Units and STM-1 TRIB in Fig. 13). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to implement such a tributary subsystem in the head-end node of Hamel et al. in view of Klinger et al. and Sotom et al. One of ordinary skill in the art would have been motivated to do this so that the head-end node of Hamel et al. in view of Klinger et al. and Sotom et al. could be "a gateway node for local, regional and national network traffic" (Jahromi, col. 10, lines 33-46).

4. **Claims 6-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamel et al. in view of Klinger et al. and Sotom et al. as applied to claim 5 above, and further in view of Armitage et al. ("Design of a Survivable WDM Photonic Network").

Regarding claims 6-7, Hamel et al. in view of Klinger et al. and Sotom et al. discloses:

The system of claim 5, wherein the communication standard is one of SONET and SDH (Hamel et al., col. 1, lines 6-12).

However, Hamel et al. in view of Klinger et al. and Sotom et al. does not expressly disclose:

wherein the communication protocol is IP (claim 6), or

wherein the communication protocol is ATM (claim 7).

Armitage et al. teaches the use of both communication protocols (Armitage et al., page 244, col. 2, under *Network Port*). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate these protocols in the system of Hamel et al. in view of Klinger et al. and Sotom et al. One of ordinary skill in the art would have been motivated to do this since they enable an additional layer of network protection and restoration (Armitage et al., middle of abstract, section "Design Protection" on p. 247+, and middle of col. 2 on p. 251).

5. **Claim 8, 17-19, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Armitage et al., as applied to claims 6-7 above, and still further in view of Dumortier ("Toward a new IP over ATM routing paradigm").

Regarding claim 8, Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Armitage et al., discloses all the limitations of claim 8 except:

wherein the communication protocol is IP encapsulated within ATM.

However, Dumortier discloses such a protocol (Dumortier, page 82, col. 2, 3rd and 4th paragraphs, page 84, col. 2, last paragraph). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use such a protocol in the system of Klinger et al. and Sotom et al., further in view of Armitage et al. One of ordinary skill in the art would have been motivated to do this to enable "a number of advantages, like higher throughput, shorter end-to-end delay, reduced router load, better utilization of L2 QoS capabilities, and route optimization" (Dumortier, page 82, 4th paragraph).

Regarding claims 17-19 and 21, claims 17-19 and 21 are system claims that correspond largely to coherent combinations of the limitations in system claims 1 and 5-8. Since all these claims are rejected under Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Armitage et al., still further in view of Dumortier, all the limitations of system claims 17-19 and 21 are found in Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Armitage et al., still further in view of Dumortier. Additionally, Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Armitage et al., still further in view of Dumortier, coherently teaches the limitations in claims 1 and 5-8. That is, the limitations in claims 1 and 5-8 are not divergently taught under Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Armitage et al., still further in view of Dumortier. Therefore, the recited means in the coherent combination of the limitations in claims 1 and 5-8 read on the corresponding means in system claims 17-19 and 21.

Claims 17-19 and 21 also include limitations absent from claims 1 and 5-8. Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Armitage et al., still further in view of Dumortier, also discloses these limitation:

at least some of the nodes (Hamel et al., nodes 24, 26, 28, and 30 in Fig. 3) sending and receiving signals using at least one secondary communication protocol (Armitage et al., page 244, col. 2);

at least one protocol subsystem coupled (Armitage et al., page 244, col. 2) to the cross-connect module;

the at least one secondary communication protocol includes ATM (Dumortier, page 83, col. 2, 2nd paragraph), and further includes IP encapsulated within ATM (Dumortier, page 82, col. 2, 3rd and 4th paragraphs, page 84, col. 2, last paragraph).

6. **Claims 9-10 and 17-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamel et al. in view of Klinger et al. and Sotom et al. as applied to claim 1 above, and further in view of Lea (U.S. Patent No. 6,115,373).

Regarding claim 9, Hamel et al. in view of Klinger et al. and Sotom et al. discloses all the limitations of claim 9 except:

a second subset (Lea, Fig. 2) of the signals further use a second communication protocol (Lea, ATM or IP in Fig. 1), the head-end node includes a second protocol subsystem (Lea, ATM controller 4 or IP controller 5 in Fig. 1) for the second communication protocol, and the head-end node is configured to send signals using the second communication protocol to the second protocol subsystem (Lea, col. 3, lines 37-45).

However, Lea teaches the second set of protocol-related limitations, as indicated above. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate this second set of protocol-related teachings of Lea in the system of Hamel et al. in view of Klinger et al. and Sotom et al. One of ordinary skill in the art would have been motivated to do this "to provide a network architecture that integrates IP and ATM into a single architecture keeping the best features of both" (Lea, col. 2, lines 10-12).

Regarding claim 10, Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Lea, discloses:

The system of claim 9, wherein the first communication standard is one of SONET and SDH (Hamel et al., col. 1, lines 6-12), the first communication protocol is IP (Lea, Fig. 1), and the second communication protocol is ATM (Lea, Fig. 1).

Regarding claims 17-20, claims 17-20 are system claims that correspond largely to coherent combinations of the limitations in system claims 1 and 9-10. Since all these claims are rejected under Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Lea, all the limitations of system claims 17-20 are found in Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Lea. Additionally, Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Lea, coherently teaches the limitations in claims 1 and 9-10. That is, the limitations in claims 1 and 9-10 are not divergently taught under Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Lea. Therefore, the recited means in the coherent combinations of the limitations in claims 1 and 9-10 read on the corresponding means in system claims 17-20.

Claims 17-20 also include limitations absent from claims 1 and 9-10. Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Lea, also discloses these limitations:

at least some of the nodes (Hamel et al., nodes 24, 26, 28, and 30 in Fig. 3) sending and receiving signals using at least one secondary communication protocol (Lea, Fig. 1); and

at least one protocol subsystem coupled (Lea, Fig. 1) to the cross-connect module.

7. **Claim 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamel et al. in view of Klinger et al. and Sotom et al. as applied to claim 1 above, and further in view of Elrefaie ("Multiwavelength Survivable Ring Network Architecture").

Regarding claim 12, Hamel et al. in view of Klinger et al. and Sotom et al. discloses:

The system of claim 1, wherein the ring network includes a first ring (Hamel et al., clockwise ring in Fig. 8) for transmitting information in a clockwise direction and a second ring (Hamel et al., counter-clockwise ring in Fig. 8) for transmitting information in a counter-

clockwise direction, the first communication subsystem comprises a pair of transceivers (Hamel et al., laser L1 and opto-electrical converter OE1 and laser L1a and opto-electrical converter OE1a in Fig. 8) coupled to the first and second rings, respectively, the second communication subsystem (Hamel et al., not shown in node N2 in Fig. 8) comprises a pair of transceivers coupled to the first and second rings, respectively, and the demultiplexer comprises a pair of demultiplexers (Hamel et al., demultiplexers DM1 and DM2 in Fig. 8) coupled to the first and second rings, respectively.

Hamel et al. in view of Klinger et al. and Sotom et al. does not expressly disclose:

said multiplexer comprising a pair of multiplexers coupled to the first and second rings, respectively.

However, Elrefaie does disclose such a pair of multiplexers (Elrefaie, Fig. 8). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to implement the multiplexer of Hamel et al. in view of Klinger et al. and Sotom et al. with a pair of multiplexers coupled to the first and second rings, as taught in Elrefaie. One of ordinary skill in the art would have been motivated to do this to provide a protection set of optical equipment (Elrefaie, Fig. 8).

Regarding claim 13, Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Elrefaie, discloses:

The system of claim 12, wherein the first communication subsystem further includes a selector (Elrefaie, page 1246, col. 2, 2nd paragraph) that compares a pair of signals received by the pair of transceivers and selects a signal from the pair of signals based on a quality parameter of each signal.

8. **Claim 14-16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Elrefaie, as applied to claim 12 above,

and still further in view of Wu et al. ("Feasibility Study of A High-Speed SONET Self-Healing Ring Architecture in Future Interoffice Fiber Networks").

Regarding claim 14, Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Elrefaie, discloses all the limitations of claim 14 except:

wherein the head-end node further includes a selector that compares a pair of signals received by the pair of demultiplexers and selects a signal from the pair of signals based on a quality parameter of each signal.

However, Wu et al. does disclose such a selector (Wu et al., 1:2 selector/generator in Fig. 4). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include a selector of Wu et al. in the system of Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Elrefaie. One of ordinary skill in the art would have been motivated to do this to accept signals from a properly working ring in the case that network components fail (Wu et al., page 917, col. 2, last paragraph).

Regarding claim 15-16, claims 15-16 are system claims that correspond to coherent combinations of the limitations in system claims 1 and 12-14. Since all these claims are rejected under Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Elrefaie, still further in view of Wu et al., all the limitations of system claim 15-16 are found in Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Elrefaie, still further in view of Wu et al. Additionally, Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Elrefaie, still further in view of Wu et al. coherently teaches the limitations in claims 1 and 12-14. That is, the limitations in claims 1 and 12-14 are not divergently taught under Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Elrefaie, still further in view of Wu et al. Therefore, the recited means in the coherent combinations of the limitations in claims 1 and 12-14 read on the corresponding means in system claims 15-16.

Claim 16 also includes a limitation absent from claims 1 and 12-14. Hamel et al. in view of Klinger et al. and Sotom et al., further in view of Elrefaie, also discloses this limitation:

a second terminal node having a second selector (Elrefaie, page 1246, col. 2, 2nd paragraph) to select a signal from the pair of signals received by the second pair of transceivers based on a quality parameter of each signal.

Response to Arguments

9. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection. Applicant presents a number of arguments against each applied document of the prior art of record (Hamel et al., Armitage et al., Sharma et al., Jahromi, Dumortier, Lea, Elrefaie, and Wu et al.). The arguments rely heavily on the newly introduced limitation to the claims that discloses nodes communicating with *each other only through* a head-end node via respective separate communication channel (emphasis Examiner's). The standing rejections address this newly introduced limitation. Thus, all of Applicant's arguments that rely on this new limitation are moot.

10. Also, Applicant's arguments filed on 24 December 2003 have been fully considered but they are not persuasive. Although Applicant presents a number of arguments against each applied document of the prior art of record (Hamel et al., Armitage et al., Sharma et al., Jahromi, Dumortier, Lea, Elrefaie, and Wu et al.), only a few remain germane in view of the new grounds of rejection. These remaining arguments are addressed here.

Regarding Hamel et al., Applicant states,

> "Hamel is silent about how the nodes communicate with each other. From the disclosure of Hamel presented above (specifically the tunable OADM) however, one can determine that the nodes taught in Hamel communicate with each other by configuring information intended for a specific node with a wavelength received by the specific node and as such are capable of communicating directly with each other. As such, the invention of Hamel teaches away from the Applicant's invention. In contrast with Hamel, the Applicant specifically teaches and claims that nodes only communicate with each other though the head-end node" (Paper No. 14, p. 13).

Examiner agrees that Hamel et al. is relatively silent about how the nodes communicate with each other (see treatment of claim 1 above). However, Examiner respectfully disagrees with Applicant's reasoning that leads to the conclusion that the invention of Hamel et al. teaches away from the Applicant's invention. Applicant presents a *suggested* and *possible* way in which the nodes communicate with each other. However, Hamel et al.'s silence leaves open the possibility of other suitable ways in which the nodes can communicate with each other. While Applicant's presented way is reasonable, it does not exclude other possible ways of operation. In view of Hamel et al.'s silence and the new grounds of rejection addressing another possible and advantageous way of operation, Applicant's argument regarding this point about Hamel et al. is not persuasive.

Applicant also states, "[E]ach terminal node has available to it the full bandwidth for its operating bandwidth. This is not the case in the invention of Hamel or in FIG. 3 described in Hamel" (Paper No. 14, p. 13). In response to this point that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *each terminal node has available to it the full bandwidth for its operating bandwidth*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Thus, Applicant's argument regarding this point about Hamel et al. is not persuasive.

Summarily, Applicant's arguments are not persuasive. Thus, Examiner respectfully maintains the standing rejections.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Kim whose telephone number is 703-305-6457. The examiner can normally be reached on Mon.-Fri. 9 AM to 5 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703-305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DSK

JASON CHAN
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